

CLAIMS

We claim :

Sub B3
1. A toothbrush comprising a conventional family of bristles at one end for brushing the teeth, and a handle at the other end for grasping the toothbrush, and contained therein an interdental hard brush and a periodontal gum massager and stimulator tip, and any other combination of dental tools, thus providing multiple dental tools in one assemblage.

Fig 1-4
2. The gum massager and stimulator tip of Claim 1 is contained in a recess beneath the toothbrush bristles and is extended and retracted into the tooth brush recess by longitudinal movement of a button that is guided in a slot in the handle that controls the travel limits of the movement.

Fig 1-4
3. The button of Claim 1 is keyed to a slider that moves longitudinally in a chamber within the said toothbrush handle and contains an internal extension tube at one end that extends through the internal recess chamber in the toothbrush and contains at the opposite end from the slider a socket for insertion, capturing and holding the gum massager and stimulator tip.

Fig 1-4
Fig 5-10
4. The interdental hard brush of Claim 1 is contained in internal chamber within the toothbrush handle, and is extended and retracted into the said toothbrush handle chamber by longitudinal movement of a button that is guided in a said slot in the handle that controls the travel limits of the movement, and the said button is keyed to a slider that moves longitudinally in the chamber within the said handle and the slider contains an extension tube at one end that extends out of the

chamber in the tube handle and contains at the opposite end from the slider a socket for insertion, capturing and holding the interdental hard brush or similar components.

Fig 1-4
5. The gum massager and stimulator tip as well as the interdental hard brush of Claim 1 can be interchanged within each internal chamber of the said handle and the said recess beneath the toothbrush bristles.

Fig 5-10
6. A toothbrush comprising a traditional family of bristles at one end for brushing the teeth and a handle at the other end with two parallel hollow cylinders for grasping the toothbrush and containing an interdental hard brush and a gum tissue massager and stimulator tip, and any other combination of dental tools, thus providing multiple dental tools in one assemblage.

Fig 5-10
7. The gum massager and stimulator tip, as well as the interdental hard brush of Claim 6 are each contained in the said two parallel handle hollow cylinders and the gum massage and stimulator tip as well as the interdental hard brush are extended and retracted into the said parallel handle cylinders by longitudinal movement of a button that is guided in a slot in the handle that controls the travel limits of the movement.

Fig 5-10
8. The button of Claim 7 is keyed to a slider that moves longitudinally inside the hollow cylinders within the said handle and contains an extension tube at one end that extends out of the end of the parallel cylinders and contains at the outward end from the said slider a socket for insertion, capturing and holding the said interdental hard brush and gum messenger and stimulator tip, and the socket in the end of the

09877645-060901

extension tube contains a slit in the tube sidewalls to permit the tube to expand larger for entry of the stem on the dental accessory having a diametrical tapered undercut to match the inside envelope of the slit sidewalls of the extension tube.

- Fig 5-10
9. The parallel hollow cylinders openings of Claim 6 contain close-out caps to protect the retracted interdental hard brush and the gum massager and stimulator tip from damage and contamination, and the close-out caps can be rotated open to permit extension of the interdental hard brush and the gum massager and stimulator tip by movement of the said button to extend either tool which in turn pushes open the said close-out cap and which in turn can be rotated back into the end of the handle hollow cylinders to seal them after use and cleaning of the tools for dental care purposes.

- Fig 11-14
10. A toothbrush comprising a conventional family of bristles at one end for brushing the teeth and handle at the other end for grasping the toothbrush and providing two covered recess chambers in the handle containing an interdental hard brush and a gum massager and applicator tip, and any other combination of dental tools, that can be rotated out of the chambers to a level position with the handle, thus providing multiple dental tools in one assemblage.

- 11-14
11. The internal sidewalls of the recess chambers of Claim 10 contain on their topside edge longitudinal grooves for insertion of a cover that slides down each groove to close out the recesses over the interdental hard brush and gum massager and stimulator tip and these recess chambers in the handle can be positioned on any side of the handle and the covers

contain on their upper outside surface a series of indent serrations for use to aid in movement of each of the covers as they slide down the said longitudinal grooves in the sidewalls of the recess chamber.

11-14
12. The interdental hard brush and the gum tissue massager and stimulator tip of Claim 11 are each attached to an extension tube that is in turn attached to a Tee-shaped support arm with an enlarged cross member having two projecting pins that operate as an axle that locate and engage in a mating hole located in the sidewall of the recess that they are contained in and each dental tool can be rotated around the cross member pivot axis provided by the said axle that is installed in each recess chamber independently of each other and the rotation permits each to be positioned horizontally in line with the handle in this rotated/extended position ready for use and the cross member of Claim 10 is curved on one side to permit it to rotate and clear the walls of the recess they are installed in, and when rotated to the horizontal position, one surface of the cross member provides a means for letting the said cover to slide over the said cross member and locks it in the horizontal position.

Fig 15
13. A toothbrush whose handle contains two threaded sleeves that when rotated thread out of the end of the handle an interdental hard brush and a gum massager and stimulator tip, and any other combination of dental tools, thus providing multiple dental tools in one assemblage.

14. The threaded sleeves of Claim 13, when rotated, screw in and out a shaft that is threaded, and the said shaft contains at one end an extension tube

with an internal socket that holds the interdental hard brush and the gum massager and stimulator tip, and the threaded sleeves of Claim 13 contain external serrations to aid the user in their rotation for extension or retraction of the interdental hard brush or the gum massager and stimulator tip in and out of the handle.

15. The body of the toothbrush handle of Claim 14 is comprised of three chambers, a forward and an aft enclosed chambers and an open center chamber that captures the two threaded sleeves and provides access to them for rotating them to screw in and out the internal threaded shafts with extension tubes that hold the interdental tools.
16. The handle of Claim 14 contains close-out caps that protect the enclosed tools from damage and contamination due to handling and storage of the toothbrush.

09877645-060901